

NRR-PMDAPem Resource

From: Wiebe, Joel
Sent: Wednesday, September 07, 2016 2:41 PM
To: Mitchel Mathews
Cc: Jessica Krejcie; Joseph Bauer
Subject: RE: Preliminary Request for Additional Information Regarding Risk Informed Aspects of Relief Request I4R-01

Mitch,

The following NRC staff members attended the clarification call on September 7, 2016.

Joel Wiebe – Division of Operating Reactor Licensing / Office of Nuclear Reactor Regulation (NRR)
Ray Gallucci – Division of Risk Assessment (DRA) / NRR
Zeechung (Gary) Wang – DRA / NRR

Based on our discussion, no changes to the questions were necessary.

You stated that Exelon's response to the questions would be provided by October 7, 2016 (within 30 days).

Joel

From: Wiebe, Joel
Sent: Thursday, August 25, 2016 10:37 AM
To: Mitchel Mathews
Cc: Jessica Krejcie ; Joseph Bauer
Subject: Preliminary Request for Additional Information Regarding Risk Informed Aspects of Relief Request I4R-01

Mitch,

This request supplements my e-mail dated August 3, 2016, with RAIs from our Probabilistic Risk Assessment Licensing Branch (APLA). These are first round RAIs from a different technical branch. These RAIs are considered preliminary to provide time to make sure they are clear and understandable. If you need a clarification phone call, let me know by September 1, 2016.

In reviewing the Exelon Generation Company, LLC (Exelon's) submittal dated April 15, 2016 (Agencywide Documents and Access Management System Accession No. ML16106A116), related to relief request I4R-01, for the Byron Station, Unit Nos. 1 and 2, the NRC staff has determined that the following information is needed in order to complete its review:

1. The fourth paragraph on page 3 of 15 of relief request 14R-01 states that "Therefore, with the exception of specific weld locations that may have changed due to maintenance or modification activities (e.g., Fukushima FLEX modification) and the addition of an Alloy 600 Augmented Examination Program, the proposed alternative RI-ISI Program for the fourth ISI interval is the same program methodology as approved in Reference 6 for the third ISI interval." Provide the results of the complete living program steps under the Byron Station RI-ISI Program that resulted from the newer selection of piping segment elements that were changed in the proposed RI-ISI program due to the identified maintenance and modifications and also other activities that may not have been identified in the submittal.
2. The table on page 4 of 15 of relief request 14R-01 shows the estimated total plant-level change in risk to the proposed fourth interval RI-ISI program. Provide: (1) the plant-level base CDF and base LERF for Unit

1 and Unit 2 based on the third interval of RI-ISI program; (2) provide the estimated risk change for system-level based on the proposed fourth interval RI-ISI program; and (3) explain the asymmetry between the delta-CDF and delta-LERF estimates for the two units, especially the fact that there are increases at Unit 1 but decreases at Unit 2.

3. Confirm whether or not new piping segment locations were identified in the proposed RI-ISI program? In accordance with the EPRI RI-ISI methodology, the upper bound for all break locations that fall within the high consequence rank is based on the conditional core damage probability (CCDP) value obtained. If the upper bound estimate was used for these new locations, demonstrate how you determined that the delta risk did not exceed the acceptance criterion for delta-CDF and Delta-LERF as established by compliance with the intent of RG 1.174 and the methodology used in EPRI TR-112657.
4. In Table 1, for Supporting Requirements (SRs) DA-C5 and C6, do both the base and adjusted cases used to estimate the risk increase include the same degree of conservatism indicated by failing to meet the SR requirements, such that the risk increase is not underestimated?
5. In Table 1, for SR IE-A7, even if the initiating frequency is the same in the difference calculation, it appears that it doesn't "cancel out" when the difference is calculated for CDF or LERF, but rather remains as a multiplier on the difference in the CCDP resulting from the change. If any "other-than-at-power" potential initiators that could apply at-power are excluded, provide a quantitative justification that the effect of excluding these has negligible impact on the delta-CDF and LERF calculations..
6. In Table 1, for SRs LE-F1 and - G3, confirm whether or not the significant contributors to large early release were identified (i.e., were they available for review by the peer reviewers even if not formally documented?).
7. The NRC SE on EPRI TR 1021467-A requires that SRs AS-A9 and SC-B2 achieve Capability Category (CC)-II, i.e., (1) realistic (from similar plants) T-H analyses be used to determine accident progression parameters and (2) expert judgment not be used except where information is lacking on the condition or response of a modeled SSC, or there is a lack of analytical methods upon which to base prediction of SSC condition or response. Confirm whether or not both of these SRs achieved CC-II, either by the peer review itself or as a result of disposition of a peer review Fact and Observation (F&O). If the latter, provide both the F&O and the disposition.

Joel

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From: Wiebe, Joel

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